This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (original): A method of delivering data packets over a bus that supports both isochronous and asynchronous modes of data transmission, comprising the steps of:

(1) at a transmitting node, translating a bus-generic request for a quality-of-service connection into a bus-specific request for time-guaranteed delivery services;

(2) from the transmitting node, transmitting the bus-specific request to an intended receiving node on the bus;

(3) at the intended receiving node, checking to determine whether sufficient resources are available to allocate an isochronous data channel on the bus and, in response to such availability, allocating the isochronous data channel;

(4) notifying the transmitting node of the allocated isochronous data channel; and

(5) from the transmitting node, transmitting data packets to the intended receiving node using the allocated isochronous data channel.

Claim 2 (original): The method of claim 1, further comprising the step of setting a timer in the transmitting node and, in response to detecting a time-out condition based on the request transmitted in step (2), transmitting the data packets to the intended receiving node using the asynchronous delivery mode.

Claim 3 (original): The method of claim 2, wherein the asynchronous delivery mode comprises transmitting the data packets using an asynchronous streaming delivery mode.

Claim 4 (original): The method of claim 2, wherein the asynchronous delivery mode comprises transmitting the data packets using an asynchronous write operation mode.

Claim 5 (original): The method of claim 1, further comprising the steps of:

(6) periodically transmitting from the intended receiving node a "keep alive" message indicating that resources have been allocated;

(7) in the transmitting node, monitoring the "keep alive" message periodically transmitted from the intended receiving node and, in response to detecting that the "keep alive" message is no longer being transmitted, reverting to a mode wherein the data packets are transmitted to the intended receiving node using the asynchronous delivery mode.

Claim 6 (original): The method of claim 1, further comprising the steps of:

(6) periodically transmitting from the transmitting node to the intended receiving node a "keep alive" message indicating that the transmission is continuing;

(7) in the intended receiving node, monitoring the "keep alive" message periodically transmitted by the transmitting node and, in response to detecting that the "keep alive" message is no longer being periodically transmitted, deallocating the bus resources.

Claim 7 (original): The method of claim 1, wherein steps (1) through (5) are performed in computer nodes that are coupled to an IEEE-1394 serial bus.

Claim 8 (original): The method of claim 1, wherein step (2) is performed in response to a quality-of-service request made by an application program executing in the transmitting node.

Claim 9 (original): A computer-readable medium comprising computer instructions which, when executed by a transmitting node coupled to a computer bus that provides both isochronous and asynchronous data delivery facilities, performs the steps of:

(1) translating a bus-generic request for a quality-of-service connection into a bus-specific request for time-guaranteed delivery services;

(2) transmitting the bus-specific request to an intended receiving node on the computer bus; and

(3) in response to receiving a message from the intended receiving node indicating that an isochronous data channel on the computer bus has been allocated, transmitting a plurality of data packets over the allocated isochronous data channel.

Claim 10 (original): The computer-readable medium of claim 9, wherein the computer instructions further perform the step of:

(4) setting a timer in the transmitting node and, in response to detecting a time-out condition based on the request transmitted in step (2), transmitting the data packets to the intended receiving node using the asynchronous delivery mode.

Claim 11 (original): The computer-readable medium of claim 10, wherein the asynchronous delivery mode comprises transmitting the data packets using an asynchronous streaming delivery mode.

Claim 12 (original): The computer-readable medium of claim 10, wherein the asynchronous delivery mode comprises transmitting the data packets using an asynchronous write operation mode.

Claim 13 (original): The computer-readable medium of claim 9, wherein the computer instructions comprise instructions that perform the step of monitoring a "keep alive" message periodically transmitted from the intended receiving node and, in response to detecting that the " keep alive" message is no longer being transmitted, reverting to a mode wherein the data packets are transmitted to the intended receiving node using the asynchronous delivery mode.

Claim 14 (original): The computer-readable medium of claim 9, wherein the computer instructions further comprise instructions that perform the step of periodically transmitting from the transmitting node to the intended receiving node a "keep alive" message indicating that the transmission is continuing.

Claim 15 (canceled)

Claim 16 (currently amended): ~~The~~ A method of ~~claim 15, further~~ delivering data packets over a bus that supports both isochronous and asynchronous modes of data transmission, comprising the steps of:

(1) from a transmitting node, transmitting data packets to an intended receiving node using the asynchronous mode of data transmission;

(2) in the intended receiving node, detecting that data packets are repeatedly received from the transmitting node and, in response thereto, allocating an isochronous data channel on the bus;

(3) notifying the transmitting node of the allocated isochronous data channel;

(4) from the transmitting node, transmitting the data packets to the intended receiving node using the allocated isochronous data channel;

(5) periodically transmitting from the intended receiving node a "keep alive" message indicating that resources have been allocated; and

(6) in the transmitting node, monitoring the "keep alive" message periodically transmitted by the intended receiving node and, in response to detecting that the "keep alive" message is no longer being transmitted, reverting to a mode wherein the data packets are transmitted to the intended receiving node using the asynchronous delivery mode.

Claim 17 (currently amended): ~~The~~ A method of ~~claim 15, further~~ delivering data packets over a bus that supports both isochronous and asynchronous modes of data transmission, comprising the steps of:

(1) from a transmitting node, transmitting data packets to an intended receiving node using the asynchronous mode of data transmission;

(2) in the intended receiving node, detecting that data packets are repeatedly received from the transmitting node and, in response thereto, allocating an isochronous data channel on the bus;

(3) notifying the transmitting node of the allocated isochronous data channel;

(4) from the transmitting node, transmitting the data packets to the intended receiving node using the allocated isochronous data channel;

(5) periodically transmitting from the transmitting node to the intended receiving node a "keep alive" message indicating that the transmission is continuing; and

(6) in the intended receiving node, monitoring the "keep alive" message periodically transmitted by the transmitting node and, in response to detecting that the "keep alive" message is no longer being periodically transmitted, deallocating the bus resources.

Claim 18 (currently amended): The method of claim ~~15~~16, wherein step (2) comprises the step of detecting that a high traffic condition exists for data packets having a common IP address.

Claims 19-20 (canceled)

Claim 21 (currently amended): A~~The~~ computer-readable medium ~~of claim 19, wherein the computer instructions further comprise instructions that perform the step of~~comprising computer instructions which, when executed by a receiving node coupled to a computer bus that provides both isochronous and asynchronous data delivery facilities, performs the steps of:

(1) detecting that data packets are repeatedly received from a transmitting node using the asynchronous data delivery facilities of the computer bus and, in response thereto, allocating an isochronous data channel on the bus;

(2) notifying the transmitting node of the allocated isochronous data channel;

(3) receiving data packets from the transmitting node over the allocated isochronous data channel; and

(4) monitoring a "keep alive" message periodically transmitted by the transmitting node and, in response to detecting that the "keep alive" message is no longer being periodically transmitted, deallocating the bus resources.

Claim 22 (currently amended): The computer-readable medium of claim 21~~19~~, wherein the computer instructions comprise instructions that implement step (2) by detecting that a high traffic condition exists for data packets having a common IP address.

Claims 23-25 (canceled)

Claim 26 (original): A system comprising a first computer node and a second computer node coupled over a communication bus that provides both asynchronous and isochronous communication modes,

wherein the first computer node transmits a request for time-guaranteed bandwidth using the isochronous communication mode to the second computer node and, in response to detecting a time-out condition for failing to receive a response to the request, transmits data packets to the second computer node using the asynchronous communication mode.

27. (New): The method of claim 17, wherein step (2) comprises the step of detecting that a high traffic condition exists for data packets having a common IP address